Teacher's Guide to Mapmaking

Activity 5 B

SOL

2008 History: 3.3, 3.6, VS.1, VS. 2, VS.3, USI.1, USI.2

Science: 4.1

Items in Trunk: NASA Land Sat Map of the Chesapeake Bay
John Smith's Map of Virginia
NASA Exploration: Then and Now Transportation (tabbed)

Teacher Items: Overhead projector or Computer Projector (*)
*computer with projection of internet pages or make transparencies of the two maps

Activity:

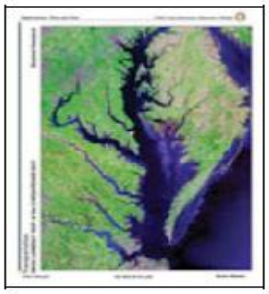
**If you have computer projection the following website has the two maps already overlaid.

http://landsat.gsfc.nasa.gov/images/archive/e0008.html

Activity Two: Mapping Jamestown

Much of the information historians have about the early settlers of Jamestown comes from the interpretation of archaeological finds, official records, or portions of diaries that have been found. One of these diaries was written by Captain John Smith.

Captain Smith and the other settlers had crude navigational tools in comparison to GPS used today. Still, Smith's maps of the James River and the Chesapeake Bay area were incredibly accurate.



Landsat Map

Captain John Smith's

Teaching Suggestion: *Print a copy of the "NASA Landsat Map of the Chesapeake Bay" and a copy of "John Smith's Map of Virginia" on transparencies. Provide a few clues to help the students orient to the Landsat image. For example, ask students to locate Washington, D.C. and Baltimore. Ask them to describe the color and shape of the cities as compared to natural*

objects such as lakes, rivers, and forests. In this image, the vegetation appears green to yellow-green. Ask students to locate and follow the major rivers. The Landsat image was created with satellite data that was converted into an image. This satellite passes overhead every 16 days. We can see changes in the Chesapeake Bay by comparing Landsat maps on a seasonal or yearly basis. This satellite system has been in place for over 35 years, so we can use the satellite images to look at changes dating back that far. Because of the accuracy of these Landsat images, we can lay one over another and they match up exactly.

1. Place the transparencies on an overhead projector.
2. Ask students to compare the two maps. Does Captain John Smith's map line up exactly with the Landsat map? What might account for differences in the maps? *(Students may note that the Chesapeake Bay has changed over time due to erosion, sediment, and development. Captain Smith had only a compass and his skills at estimating distance to help him record information on his map. He relied on the eyewitness reports of others to fill in the details for places he had not personally visited, and those places tend to be less accurately positioned on his maps than the places Smith actually scouted himself.)*
3. Give students a copy of "John Smith's Map of Virginia."
4. Ask each student to write a journal entry that tells about a journey from one place on the map to another. Ask them to identify the beginning point on the map and use compass directions and distances to navigate to the ending point on the map.